

Standard 7-7 The student will demonstrate an understanding of the significant political, economic, geographic, scientific, technological, and cultural changes and advancements that took place throughout the world from the beginning of the twentieth century to the present day.

7-7.2 Explain the significance and impact of the information, technological, and communications revolutions, including the role of television, satellites, computers, and the Internet. (H)

Taxonomy Level: B 2 Understand/Conceptual Knowledge

Previous/future knowledge:

In 5th grade students explained how technological innovations have changed daily life in the United States since the early 1990s, including changes in the economy and the culture that were brought about by computers, electronics, satellites, and mass communication systems (5-6.3).

In U.S. history students will learn about the lasting impact of the scientific and technological developments in America after World War II (USHC-8.5).

It is essential for students to know:

Advances in science and technology became especially intense during the Cold War era. In the race for space, the Soviets launched Sputnik in 1957. This was followed by the initiation of a US space program and an increased interest in science and math education that culminated in the first US lunar landing in 1969. Following these two milestones in space exploration, the US and Soviet Union both launched shuttle missions to accomplish various technological and scientific tasks. The International Space Station (ISS) was a joint venture launched in 1998 by sixteen nations to create a working laboratory for experimentation in space.

Other advances occurred in the area of **information, technology, and communication** in the twentieth century. Beginning in the 1950s, the **television** became the primary source by which people throughout the world gain access to up-to-date news and global events. This access has fostered greater empathy and understanding in the general public for events in the United States (such as the Civil Rights Movement) and allowed far-off events (such as the Iraq War) to become a part of everyday life.

Since the launching of the first **satellites**, these instruments have been used to increase worldwide communication. Now events can be broadcast worldwide, linking countries and people around the world. Satellites today can be used for radios, TV access, as well as other aspects of pop culture..

Computers once were bulky, room-sized machines that were difficult to use. Now, some are as small as the palm of one's hand and do the work once done by several other machines. Today computers are used by millions of people around the world to run

assembly lines, power modern appliances and assist in business operations. The **Internet** further connected businesses and individuals. The Internet is the connection of computer networks around the world, rising in usage primarily between 1995 and 2002. The Internet allows information to be transferred between individuals over long distances. This is significant because people can now work from home, send information to remote locations, etc. Cell phones now offer access to the Internet, further enhancing remote access. The combination of these technologies has created a global economy further dependent on modern technology (7-7.6).

It is not essential for students to know

Students do not need to know specific dates of each invention, specific details of each invention, or specific people associated with the invention of these technologies. However, they do need to have a generalized understanding of the chronology of the development of these inventions and their relationships to each other.

Assessment guidelines:

The objective of this indicator is to **explain** the significance and impact of the information, technological, and communications revolutions; therefore assessments should require students to **describe** the role of television, satellites, computers and the Internet. Furthermore, students should be able to **infer** the impact of these inventions on modern society.